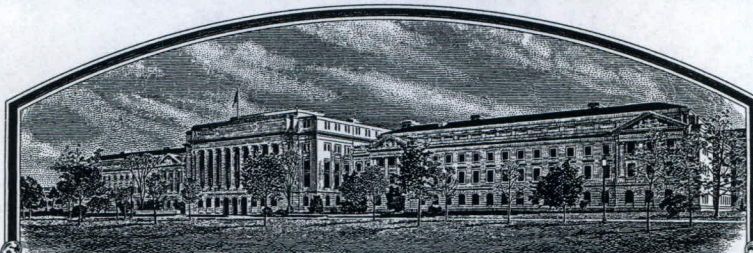


No.

200700171



# THE UNITED STATES OF AMERICA

**TO ALL TO WHOM THESE PRESENTS SHALL COME:**

**Plant Research (NZ) Ltd.**

*Whereas*, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

PEA, FIELD

'Aragorn'

*In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this sixteenth day of May, in the year two thousand and eight.*

*Attest:*

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

  
Secretary of Agriculture

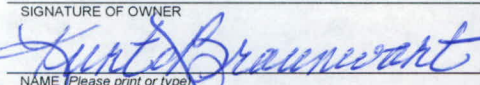


U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Plant Research (NZ) Ltd. <del>Adrian Russell</del>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME PRL 4012	3. VARIETY NAME ARAGORN
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  Lincoln Green Farm Road, Lincoln University Caterburg, New Zealand		5. TELEPHONE (include area code) +64-3-325-7031	<b>FOR OFFICIAL USE ONLY</b> <b>PVPO NUMBER</b> <b>#200700171</b> <b>FILING DATE</b> <b>MARCH 5, 2007</b>
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)  Ltd. (Limited)		6. FAX (include area code) +64-3-325-7131	
8. IF INCORPORATED, GIVE STATE OF INCORPORATION		9. DATE OF INCORPORATION	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  ProGene, LLC, Kurt Braunwart 860 S Crestline Road Othello, WA 99344			<b>FILING AND EXAMINATION FEES:</b> <b>\$ 4,382.00</b> <b>DATE 3/5/07</b> <b>CERTIFICATION FEE:</b> <b>\$ 768.00</b> <b>DATE 3/17/08</b>
11. TELEPHONE (Include area code) 509-488-3977	12. FAX (Include area code) 509-488-5289	13. E-MAIL progene@cbnn.net	
14. CROP KIND (Common Name) Field Pea	16. FAMILY NAME (Botanical) Lecominosae	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP Pisum Sativum	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23)	
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Exhibit F. Declaration Regarding Deposit g. <input checked="" type="checkbox"/> Voucher Sample (3,000 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) h. <input checked="" type="checkbox"/> Filing and Examination Fee (\$4,382), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.	
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Kurt Braunwart Agent for Owner		NAME (Please print or type)	
CAPACITY OR TITLE Owner, ProGene LLC	DATE 02-23/2007	CAPACITY OR TITLE	DATE

(See reverse for instructions and information collection burden statement)



**GENERAL INSTRUCTIONS:** To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E, F; (3) for a tuber reproduced variety, verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; and (4) payment by credit card or check drawn on a U.S. bank for \$4,382 (\$518 filing fee and \$3,864 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice). **NEW:** With the application for a seed reproduced variety or by direct deposit soon after filing, the applicant must provide at least 3,000 viable untreated seeds of the variety *per se*, and for a hybrid variety at least 3,000 untreated seeds of each line necessary to **reproduce** the variety. Partial applications will be held in the PVPO for not more than 90 days; then returned to the applicant as un-filed. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a payment by credit card or check payable to "Treasurer of the United States" in the amount of \$768 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

**Plant Variety Protection Office**  
**Telephone:** (301) 504-5518 **FAX:** (301) 504-5291  
**General E-mail:** PVPomail@usda.gov  
**Homepage:** <http://www.ams.usda.gov/science/pvpo/PVPindex.htm>

#200700171

#### **SPECIFIC INSTRUCTIONS:**

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and **provide evidence** that the permanent name of the application variety (even if it is a parental, inbred line) has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: U.S. Department of Agriculture, Agricultural Marketing Service, Livestock and Seed Programs, **Seed Regulatory and Testing Branch**, 801 Summit Crossing Place, Suite C, Gastonia, North Carolina 28054-2193 Telephone: (704) 810-8870. <http://www.ams.usda.gov/lsg/seed.htm>.

#### **ITEM**

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;  
(2) the details of subsequent stages of selection and multiplication;  
(3) evidence of uniformity and stability; and  
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;  
(2) attach replicated statistical data for characters expressed numerically and demonstrate that these are clear differences; and  
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

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**22. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

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**23. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

USA -- May 2006 release date and sale of seed for first commercial evaluation.

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**24. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

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According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.



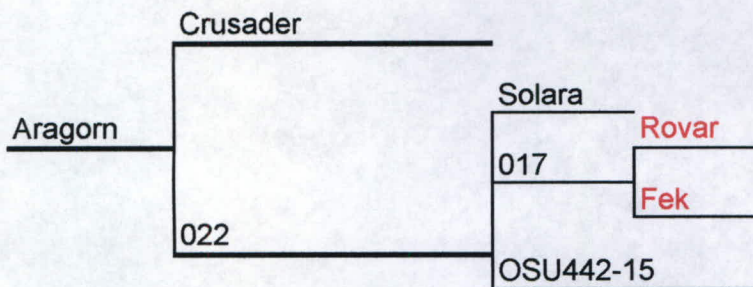
200700171

## Aragorn

### Exhibit A

The cross from which Aragorn was selected was made at Lincoln, New Zealand in September 2000 by Plant Research (NZ) Ltd

Crusader X 022



Crusader is a pea variety developed in New Zealand  
 022 is a breeding line owned by Plant Research (NZ) Ltd  
 017 is a breeding line owned by Plant Research (NZ) Ltd  
 OSU442-15 is an accession originating from Oregon State University  
 Solara is a variety owned by Cebeco Ltd

### Details of Development

	Generation	Year	Stock #	# SPS's	Amount	Selection Criteria
NZ	F1	2001	20024			No criteria used; bulked
NZ	F2	2001	20024	24		Yield, Maturity, Lodging, & Seed quality
NZ	F3	2001/02	PLR USA 4.4	14		Yield, Maturity, Lodging, & Seed quality
USA	F4	2002	02SI 4012	4		Maturity, Pod set, Lodging, & % Double pods
NZ	F6	2002/03	02SI 4012	12		Maturity, Pod set, Lodging, & % Double pods
USA	F7	2003	03SI 9303		14#	Yield, Maturity, Lodging, & Bleach tolerance
NZ	F8	2003/04	03SI 9303		120#	Yield, Maturity, Lodging, & Bleach tolerance
USA	F9	2004	P487		656#	Yield, Maturity, Lodging, & Bleach tolerance
NZ	F10	2004/05	PRL 4012		9,740#	Yield, Maturity, Lodging, & Bleach tolerance
USA	F11	2005	P551		128,693#	Yield, Maturity, Lodging, & Bleach tolerance
USA	F11	2005	P552		86,640#	Yield, Maturity, Lodging, & Bleach tolerance

Aragorn was also tested as PRL 4012.

Lot P551 has been increased to commercial size quantities.

Aragorn has been observed for 8 generations, and has been uniform and stable with no variants seen.



200700171

## Aragorn

### Exhibit B

Aragorn is most similar to the variety Cruiser, however Aragorn differs in the following ways.

1. Aragorn is shorter than Cruiser.  
69.18 cm for Aragorn vs. 78.80 cm for Cruiser
2. Aragorn has a larger seed size than Cruiser.  
19.0 g/100 sd for Aragorn vs. 18.0 g/100 sd for Cruiser



# Aragorn vs. Cruiser Plant Height

200700171

		<u>Aragorn Cruiser</u>	
		cm	cm
<u>Year</u>	<u>Location</u>		
2006	Othello, WA	87.63	95.25
		74.93	96.52
		60.96	97.79
		85.09	106.68
		76.20	93.98
		74.93	97.79
		88.90	93.98
		67.31	78.74
		77.47	91.44
		68.58	68.58
		83.82	76.20
		87.63	86.36
		76.20	78.74
		63.50	81.28
		73.66	81.28
		77.47	99.06
		69.85	86.36
		69.85	95.25
		54.61	63.50
		73.66	55.88
		74.61	86.23

		<u>Aragorn Cruiser</u>	
		cm	cm
<u>Year</u>	<u>Location</u>		
2007	Moscow, ID	63.50	77.47
		63.50	74.93
		71.12	69.85
		68.58	67.31
		59.69	53.34
		74.93	71.12
		55.88	72.39
		64.77	78.74
		66.04	80.01
		58.42	77.47
		62.23	82.55
		53.34	73.66
		63.50	62.23
		67.31	73.66
		62.23	64.77
		53.34	64.77
		63.50	68.58
		68.58	66.04
		68.58	72.39
		66.04	76.20
		63.75	71.37

		<u>Aragorn Cruiser</u>	
		cm	cm
<u>Year</u>	<u>Location</u>		
2005	Moscow, ID	49.53	52.07
		53.34	62.23
		53.34	58.42
		50.80	43.18
		45.72	58.42
		57.15	53.34
		45.72	48.26
		58.42	53.34
		60.96	48.26
		50.80	60.96
		52.58	53.85



A N A L Y S I S   O F   V A R I A N C E  
Aragorn PVP, 2007  
Crites-Moscow

PLANT HEIGHT 2006

200700171

Variable: GHEIGHT: Monday, October 22, 2007, 09:11:00

Source	df	SS	MS	F-value	Pr> F
Total	39	6233.496			
BLOCK	19	3355.276	176.593	2.20	0.0473
ENTRY	1	1350.360	1350.360	16.79	0.0006
Residual	19	1527.860	80.414		

Grand mean = 80.423      R-squared = 0.7549      C.V. = 11.15%

LSD for ENTRY = 4.9034, S.E.D. = 2.8357, r= 20.0, Herit. = 0.441  
t (2-sided a=0.100, 19 df) = 1.7291      MSE = 80.41368

ENTRY

Averages			
Level	--- Y ---	Cv	Rank
2	86.23	15.2	1 Cruiser
1	74.61	12.3	2 Aragorn

GHEIGHT Means Separation Table - LSD = 4.903

ENTRY	MEAN	SIGNIF
2	86.23	a
1	74.61	b



A N A L Y S I S   O F   V A R I A N C E  
Aragorn PVP #5, 2006  
Crites-Moscow

PLANT HEIGHT 2007

200700171

Variable: GHEIGHT: Friday, October 19, 2007, 17:05:08

Source	df	SS	MS	F-value	Pr> F
Total	39	2110.318			
BLOCK	19	828.063	43.582	1.18	0.3608
ENTRY	1	580.644	580.644	15.72	0.0008
Residual	19	701.612	36.927		

Grand mean = 67.564      R-squared = 0.6675      C.V. = 8.99%

LSD for ENTRY = 4.0220, S.E.D. = 1.9216, r= 20.0, Herit. = 0.424

t (2-sided a=0.050, 19 df) = 2.0930      MSE = 36.92692

ENTRY

Level	Averages --- Y ---	Cv	Rank
-------	-----------------------	----	------

2	71.37	9.8	1 Cruiser
1	63.75	8.8	2 Aragorn

GHEIGHT Means Separation Table - LSD = 4.022

ENTRY	MEAN	SIGNIF
-------	------	--------

2	71.4	a
1	63.8	b



# ANALYSIS OF VARIANCE

Aragorn vs. Cruiser PVP  
Plant Height (cm)

Variable: Green Height: Wednesday, January 23, 2008, 15:29:18

Source	df	SS	MS	F-value	Pr> F
Total	99	19147.279			
BLOCK	49	14665.608	299.298	5.05	0.0000
ENTRY	1	1580.222	1580.222	26.69	0.0000
Residual	49	2901.450	59.213		

Grand mean = 69.837      R-squared = 0.8485      C.V. = 11.02%

LSD for ENTRY = 3.0927, S.E.D. = 1.5390, r = 50.0, Herit. = 0.339  
t (2-sided a=0.050, 49 df) = 2.0096      MSE = 59.21326

## ENTRY

Averages

Level --- Y --- Cv      Rank

2	73.81	21.0	1 Cruiser
1	65.86	16.6	2 Aragorn

GHEIGHT Means Separation Table - LSD = 3.093

ENTRY MEAN      SIGNIF

2	73.81	a
1	65.86	b



# **Aragorn vs. Cruiser**

## **Seed size**

Year	Location	<b>Aragorn</b>	<b>Cruiser</b>
		g/100 sd	g/100 sd
2004	ProGene - Fleener's	19.3	18.4
2005	ProGene - Fleener's	18.2	17.3
2005	ProGene - Crite's	17.6	17.4
2005	ProGene - Wilton, ND	16.9	14.5
2005	CDC Saskatoon	19.4	18.8
2005	UI Nez Perce	18.4	16.7
2005	UI Moscow	20.6	19.1
2006	UI Nez Perce	17.3	16.0
2006	UI Moscow	21.3	20.1
2006	ProGene - Advanced	18.1	16.9
2006	ProGene - Preliminary	18.6	17.6
2006	NDSU - Minot	20.1	19.4
2006	NDSU - Carrington	20.6	20.4
2006	CDC Saskatoon	20.3	18.8
2006	ProGene - Wilton, ND	17.5	17.1
2006	NDSU - Williston	18.4	18.5
2006	Wilton, ND	19.1	18.7
2006	USDA/WSU	19.4	18.1
		19.0	18.0



ANALYSIS OF VARIANCE  
Aragorn PVP #4, 2007  
Crites-Moscow

Variable: Seed Size: Friday, February 16, 2007, 10:35:08

#200700171

Source	df	SS	MS	F-value	Pr> F
Total	35	72.336			
BLOCK	17	60.691	3.570	18.22	0.0000
ENTRY	1	8.314	8.314	42.42	0.0000
Residual	17	3.331	0.196		

Grand mean = 18.469      R-squared = 0.9539      C.V. = 2.40%

LSD for ENTRY = 0.3113, S.E.D. = 0.1476, r= 18.0, Herit. = 0.697  
t (2-sided a=0.050, 17 df) = 2.1098      MSE = 0.19596

ENTRY

Averages		Cv	Rank
Level	--- Y ---		
1	18.95	6.7	1 Aragorn
2	17.99	8.1	2 Cruiser

Seed Size Means Separation Table - LSD = 0.311

ENTRY	MEAN	SIGNIF
1	19	a
2	18	b



According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**Exhibit C**

**OBJECTIVE DESCRIPTION OF VARIETY  
Pea (*Pisum sativum* L.)**

NAME OF APPLICANT (S) Plant Research (NZ) Ltd. ProGene LLC	TEMPORARY OR EXPERIMENTAL DESIGNATION PRL 4012	VARIETY NAME ARAGORN
ADDRESS (Street and No. or RD No., City, State, Zip Code and Country) 860 S. Crestline Road Othello, WA 99344		FOR OFFICIAL USE ONLY PVPO NUMBER #200700171

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g.,    or   ) when the number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: ROYAL HORTICULTURAL SOCIETY. Please answer all questions for your variety; lack of response may delay progress of your application.

**1. TYPE:**

1 = Garden 2 = Field 3 = Edible-podded 4 = Other (Specify) \_\_\_\_\_

**2. MATURITY:**

Node Number of First Bloom:    No. of Days Processing    Heat Units

No. of Days Earlier Than  } 1 = Alaska 2 = Thomas Laxton WR 3 = Little Marvel  
Days Same As  } 4 = Wando 5 = Alderman WR 6 = Australian Winter  
  No. of Days Later Than  } 7 = Other (Specify) CRUISER

**3. PLANT HEIGHT:**

cm High  
  cm Shorter Than  Name of Check Cultivar CRUISER  
Same As  Same as Check Cultivar \_\_\_\_\_  
  cm Taller Than  Name of Check Cultivar \_\_\_\_\_

**4. VINE:**

Habit: 1 = Determinate 2 = Indeterminate  
 Branching: 1 = None (Alaska) 2 = 1-2 Branches (Little Marvel) 3 = More than 2 Branches (Dwarf Gray Sugar)  
 Internodes: 1 = Straight 2 = Zig Zag   Number of Nodes  
 Stockiness: 1 = Slim (Alaska) 2 = Medium (Thomas Laxton WR) 3 = Heavy (Alderman)



## 5. LEAFLETS:

N/A ☐ Color: 1 = Light Green (Alaska WR) 2 = Medium Green (Thomas Laxton WR) 3 = Dark Green (Alderman)  
4 = Other (Specify) \_\_\_\_\_ 5 = Blue Green 6 = Yellow Green 0 = Not Applicable

☐ Wax: 1 = None 2 = Light 3 = Medium 4 = Heavy 0 = Not Applicable

☐ Molding: 1 = Not Marbled 2 = Marbled (Alaska) 0 = Not Applicable

☐ Number of Leaflet Pairs: 1 = Not Paired 2 = One 3 = Two 4 = Three or More 0 = Not Applicable

☒ Leaflet Type: 1 = Leafless 2 = Semi 3 = Normal

MAH 12/01/2007

## 6. STIPULES:

N/A ☒ 1 = Lacking 2 = Present ☐ 1 = Not Clasping 2 = Clasping ☒ 1 = Not Marbled 2 = Marbled

☐ Size (Compared with Leaflets): 1 = Smaller 2 = Same 3 = Larger 0 = Not Applicable

☐ Color (Compared with Leaflets): 1 = Lighter 2 = Same 3 = Darker 0 = Not Applicable

☒ Color: 1 = Light Green 2 = Medium Green 3 = Dark Green 4 = Blue Green 5 = Yellow Green 0 = Not Applicable

Color Chart Value: 137A

Select the Color Chart Used to Determine the Values:

☒ Royal Horticulture Society Colour Chart☐ Munsell Color Chart☐ Other \_\_\_\_\_

☒ Stipule Size: 1 = Small 2 = Medium 3 = Large

Please Provide Comparative Varieties (Check Varieties) and Stipule Color

Variety (1)	Variety (2)	Variety (3)
Variety Name: CRUISER		
Stipule Size: MEDIUM		
Color: MEDIUM GREEN		
Color Chart Value: 137B		

## 7. FLOWER COLOR:

☒ Venation ☒ Standard ☒ Wing ☒ Keel

1 = White 2 = Greenish 3 = Lavender 4 = Purple 5 = Red 6 = Other (Specify) \_\_\_\_\_

## 8. PODS:

☒ Shape: 1 = Straight 2 = Slightly Curved 3 = Curved

☒ End: 1 = Pointed (Alderman) 2 = Blunt (Alaska)

☒ Color: 1 = Light Green (Alaska WR) 2 = Medium Green 3 = Dark Green (Alderman)  
4 = Other (Specify) \_\_\_\_\_ 5 = Blue 6 = Purple 7 = Yellow

☒ Surface: 1 = Smooth 2 = Rough ☒ Surface: 1 = Shiny 2 = Dull

☒ Borne: 1 = Single 2 = Double 3 = Single and Double 4 = Single, Double & Triple 5 = Double & Triple  
6 = Triple 7 = Other (Specify) \_\_\_\_\_ 8 = Quad, Single, Double, Triple 9 = Quad

☒ cm Length 6.3 ☒ mm Width (Between Sutures) 10.7 ☒ No. Seeds Per Pod 06

## 9. SEEDS: (95-100 Tenderometer)

N/A

☐ Color: 1 = Light Green 2 = Green 3 = Dark Green 4 = Other (Specify) \_\_\_\_\_  
5 = Yellow 6 = Brown 7 = Yellow Green

1	2	3	4	5	6	7	8	Average
Seive: %								



## 9. SEEDS: (Dry-Mature)

☐4 Shape: 1 = Flattened 2 = Angular 3 = Oval 4 = Rounded

☐1 Surface: 1 = Smooth 2 = Dimpled ☐2 Luster: 1 = Shiny 2 = Dull  
3 = Wrinkled

☐1 Color Pattern: 1 = Monocolor 2 = Mottled 3 = Striped 4 = Dotted

☐4 Primary Color: } 1 = Creamy White 2 = Cream & Green 3 = Light Green 4 = Medium Green  
5 = Dark Green 6 = Blue Green 7 = Yellow 8 = Brown  
☐ Secondary Color: } 9 = Red 10 = Gray 11 = Black 12 = Salmon  
13 = Purple 14 = Tan 15 = White 16 = Pink  
17 = Yellow Green

☐2 Hilum Color: 1 = White 2 = Tan 3 = Black

☐1 Cotyledon Color: 1 = Green 2 = Yellow 3 = Orange 4 = Cream

☐19 Grams per 100 Seeds 19.0 18 TRIALS

## 10. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Moderately Resistant, 4 = Moderately Susceptible, 5 = Tolerant)

<input type="checkbox"/> 2 Fusarium Wilt – Race 1	<input type="checkbox"/> 0 Fusarium Wilt (Near Wilt) – Race 2
<input type="checkbox"/> 0 Ascochyta Blight	<input type="checkbox"/> 0 Common Mosaic
<input type="checkbox"/> 0 Bacterial Blight	<input type="checkbox"/> 1 Pea Enation Mosaic Virus
<input type="checkbox"/> 1 Downy Mildew	<input type="checkbox"/> 2 Seedborne Mosaic Virus
<input type="checkbox"/> 1 Powdery Mildew	<input type="checkbox"/> 2 Yellow Bean Mosaic Virus
<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> 0 Leaf Roll Virus
<input type="checkbox"/> Other (Specify) _____	<input type="checkbox"/> 3 Other (Specify) MYCOSPHAERELLA PINODES

## 11. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Moderately Resistant, 4 = Moderately Susceptible, 5 = Tolerant)

☐0 Aphids ☐ Other (Specify) \_\_\_\_\_

## 12. Additional information on any item above, or general comments that may aid in identification:



U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S)

**Plant Research (NZ) Ltd.**2. TEMPORARY DESIGNATION  
OR EXPERIMENTAL NUMBER  
**PRL 4012**

3. VARIETY NAME

**ARAGORN**

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)

**P.O. Box 19  
Lincoln, Canterbury  
New Zealand**

5. TELEPHONE (Include area code)

**011-64-3-325-7031**

6. FAX (Include area code)

**011-64-3-325-7131**

7. PVPO NUMBER

**200700171**

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☐ YES☒ NO**New Zealand**

10. Is the applicant the original owner?

☒ YES☐ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES☒ NO

If no, give name of country

**New Zealand**

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

**Plant Research (NZ) Ltd. -- Owner****ProGene L.L.C. -- Licensed U.S. representative****Letter from original breeder enclosed****PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.





#200700171

**Plant Research (NZ) Limited**  
*Advanced Plant Breeding*

Wednesday, January 24, 2007

**To whom it may concern**

This is to certify that the field pea (*Pisum sativum*) variety named Aragorn submitted by Mr Kurt Braunwart of Progene LLC for Plant Variety Right protection in the USA was bred, and is owned by Plant Research (NZ) Ltd.

Progene LLC have been appointed Production and marketing Licencee for the USA for Aragorn and is thereby authorized by us to apply for Plant Variety Protection in the USA, and submit all necessary documentation to the PVP office.

Yours sincerely

Adrian Russell  
Managing Director  
Plant Research (NZ) Ltd  
[plantresnz@xtra.co.nz](mailto:plantresnz@xtra.co.nz)





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The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

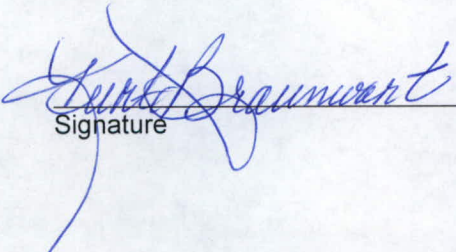
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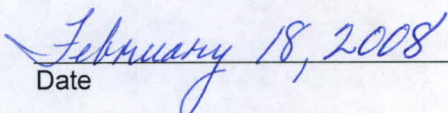
U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705

EXHIBIT F  
DECLARATION REGARDING DEPOSIT

NAME OF OWNER (S) Plant Research (NZ) Ltd.	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) P.O. Box 19 Lincoln, Canterbury New Zealand	TEMPORARY OR EXPERIMENTAL DESIGNATION PRL 4012  VARIETY NAME ARAGORN
NAME OF OWNER REPRESENTATIVE (S) ProGene L.L.C Kurt Braunwart	ADDRESS (Street and No. or RD No., City, State, and Zip Code and Country) 860 S Crestline Othello, WA 99344	FOR OFFICIAL USE ONLY  PVPO NUMBER 200700171

I do hereby declare that during the life of the certificate a viable sample of propagating material of the subject variety will be deposited, and replenished as needed periodically, in a public repository in the United States in accordance with the regulations established by the Plant Variety Protection Office.

  
Signature

  
Date





#200700171

**Plant Research (NZ) Limited**  
*Advanced Plant Breeding*

Wednesday, January 24, 2007

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Yours sincerely

Adrian Russell  
Managing Director  
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